

ABSTRACT OF THE DISCLOSURE

1 A data bit stream is segmented into 4-bit data words and successively
2 shifted two bits at a time. For each 4-bit data word a corresponding 3-bit
3 code word is detected in a conversion table. Two higher significant bits of
4 each data word is converted to the detected code word and two lower
5 significant bits of the data word is then converted as two higher significant
6 bits of a subsequent data word to a corresponding code word, so that a
7 channel bit stream formed by a series of such code words has no consecutive
8 1's. A digital sum value of the channel bit stream is determined and a search
9 is made for a code word "010" which is consecutive with a code word "000".
10 The detected code word "010" is replaced with a substitute code word "000"
11 if the replacement results in the digital sum value approaching zero.